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VII.—On *Material and Form in Language*.

By W. D. WHITNEY,

PROFESSOR OF SANSKRIT AND COMPARATIVE PHILOLOGY IN YALE COLLEGE.

The distinction of material and form in language is a current and familiar one. Yet, like other distinctions of an abstract character, it is liable to be unclearly, or even erroneously apprehended; and I have therefore thought that a summary discussion and illustration of it (although perhaps appearing to some uncalled for) might not, upon the whole, be without value. I propose to carry on the discussion in a manner as unpretending and as little abstruse as possible, and to look for illustration among the phenomena of language most familiar to us all, with the view of arriving at certain general conclusions of a practical nature as to the characteristics and history of the family of languages of which our English speech is a member.

The formal distinctions which lie nearest at hand in English are those of number and case in nouns and pronouns, and of tense and person in verbs. Thus, by a change of form in the words employed, we have from *house* a plural *houses*; and in like manner *men* from *man*. We give also a particular form to a noun in order to mark its value as indicating the possessor of anything: thus *man's*, *men's*; from *man* and *men*; and, in most pronouns, we make a change of form to signify the objective relation as distinguished from that of subject: thus, *me*, *us*, *him*, *her*, *them*, *whom*, as compared with *I*, *we*, *he*, *she*, *they*, *who*. The formal distinction of three persons is complete in at least the present singular of the verb: thus, *I love*, *thou lovest*, *he loves*; and we make a clear separation of past time from present in such forms as *love* and *loved*, *deal* and *dealt*, *lead* and *led*, *give* and *gave*.

We see already, from these examples (leaving out of view at present the use, as correlative forms, of words apparently unconnected with one another, as in those highly "irregular" parts of speech the pronouns, the substantive verb, and their like), that the leading means of formal distinction in our lan-

guage are twofold: external addition, as in *houses, its, loves, loved*; and internal modification, as in *men, gave*. The same, as every one knows, is true to a very wide extent, or almost universally, among the languages akin with ours.

Again, such words as *give, man*, although in one sense mere crude-forms, unmodified root or base, are nevertheless in a truer sense forms. *Man* is clearly marked as nominative (or accusative) singular by the absence of the modifications which would make it possessive or plural; *give* is distinctly present, because we know that the preterit is *gave*; and the unconscious presence before our minds of *givest* and *gives* characterizes it at least partially in respect to person also. The presence, then, of a formal or formative element in a word is not indispensably necessary in order to make of it a form.

But there is another way in which formal distinctions are kept up in a language without aid from external signs. *Pennæ*, in Latin, is properly regarded as now genitive singular, now dative singular, now nominative or vocative plural, because in other words the distinction of those forms is perfectly made, and the mind seeks and apprehends it here as well. The Latin has a dative case and an ablative, although universally in the plural, and most often in the singular, dative and ablative have the same form; there are words enough in which the two are different to keep alive everywhere the conception of their separateness. Greek and Latin neuters have both a nominative and an accusative case, in spite of the fact that the two are always alike, by virtue of a mentally recognized parallelism with masculines and feminines, which distinguish the accusative from the nominative. And, coming to our own tongue again, the grammatical distinction of subject and object is so constantly and clearly brought home to us in the pronouns, that we cannot well help transferring it to the nouns, and crediting them also with the possession of a nominative and an objective case. If we had no such pairs of correlatives as *I* and *me*, *he* and *him*, we should no more think of an objective in connection with our nouns than of a dative or a locative. Indeed, even the occurrence of distinct dative constructions like *give HIM the book, he does*

his OWNER *credit*, does not make us recognize a dative case of pronouns and nouns, because there is not a word in the language which has a dative separate in form from the objective. Again, let our scheme of verbal inflection be as imperfect as it may, so long as we continue to say *I love, thou lovest, he loves*, and to set *you love* against *thou lovest*, and *they love* against *he loves*, so long shall we continue to attribute person and number to our verbs, through their whole conjugation. Once more, although the formal apparatus which used to serve for the expression of grammatical gender in our nouns and adjectives has gone out of employment and been forgotten, yet the ever-recurring use of *he, she, and it* in reference to all the subjects of thought classifies them in our minds as masculine, feminine, and neuter, and puts the distinctions of the two sexes, or the want of sex, before us as calling for constant notice and designation; thus giving to gender, after all, a formal and pervading recognition, very different from the oblivion which has come over it in the Persian, for example, where the distinction of sex has been effaced even in the pronoun, and the speaker no more heeds whether his subject of thought is male or female than whether it is large or small, adult or young. And we almost feel as if that great majority of human languages in which sex, like size and age, is ignored as a ground of formal grammatical distinction, were guilty of neglecting one of the natural and essential characteristics of things, one of which the expression, in some way and measure, was necessary to the completeness of a language.

We see further, then, that a formal character may be given by association and analogy, as well as by inference, to words in which it is not indicated by a formative element.

Our past tense *loved*, a pure and undoubted form, is by comparative philology clearly shown to be a contraction of *love-did*. With this last, now, is logically equivalent its common substitute *did love*. In the verbal phrase (as we may call it) *did love*, the word *did* performs precisely the same office as the formative element *d* in the verbal form *loved*; it is a mere indicator of relation. In the one case as in the other, it has abandoned its former more material value as designating the

action of making or effecting (still earlier, the yet more material one of putting, placing, furnishing), and become a tense-sign. Such a vocable we call usually, and very properly, a "form-word." Form-words are found in all or nearly all languages, constituting in some a much larger and more important part of the formative apparatus than in others; the prevalence of their use over that of formative elements in actual combination with radical elements in a given tongue gives to that tongue, as we say, an analytic rather than a synthetic character. Such a character, as every one knows, belongs in an extreme degree to the English; we speakers of English express by form-words a host of relations which in Greek or Sanskrit, for example, are denoted by suffixes that constitute integral parts of the forms of inflection and derivation. Thus, in verbal conjugation, *have* stands by the side of *do* as a tense-auxiliary, and *shall* and *will* as indicators of future action. In noun-declension, in like manner, the possessive relation may be intimated by an auxiliary or form-word, the preposition *of*, instead of the possessive case-sign: thus, *the house of my neighbor*, instead of *my neighbor's house*. And other case-relations, apprehended and synthetically expressed as such in the classical languages, are signified by us through the means of other prepositions.

In fact, as a part of speech, the preposition is a form-word, having for its office the expression of a relation. A relation, to be sure, possessing in some cases a more material tinge than in others: for there are degrees in the purity of formal character; and *off*, for example, as it implies sensible substantial removal in space, is less absolutely formal than its differentiated derivative *of*. Nor is the preposition the only part of speech filling a formal office. Another is the conjunction, which shows the relation between clauses, and by the aid of which are brought clearly to light in more developed languages a host of nice relations which in those of simpler structure are left to inference. Yet another is the article, of which the bearing is so subtle that it hardly admits of definition. And then there is the pronoun, which is of far greater importance and higher antiquity in the history of language than either of the others. The pronoun, as its name hints,

designates by their relational aspect the same objects which the noun has come to designate by their characteristic qualities; and, long before there were articles, or conjunctions, or prepositions in our family of languages, the pronoun and its derivative, the pronominal adverb, performed a very essential part in the formal development of expression.

For mainly by the help of the pronoun, as the comparative philologists claim to have proved, was worked out even the most fundamental of all formal distinctions, that of the parts of speech themselves. That one combination of sounds should be used only as a verb, another only as a noun, an adjective, or the like, is a difference essentially analogous with that by which one is used as a singular and another as a plural, one as a present and another as a past, and so on. And, in the latter cases as in the former, the differentiation is effected, the separate office established, by means of formative elements, prefixes and suffixes. There are languages, too, in which the distinction of parts of speech is almost or wholly wanting, just as in others we find no distinction of gender or of case.

Yet even such languages — as for example the Chinese — are far from being absolutely destitute of the means of formal distinction. Besides their possession of auxiliary or form-words — “empty words,” as the Chinese grammarians call them, as opposed to the fullness and solidity of the more material resources of expression — they have yet one method which it remains for us to take note of; a syntactical one, consisting in the order in which the constituents of the sentence are arranged. If, in a given tongue, an epithet placed before a name, as *good man*, is always understood as attributive, and, placed after it, as *man good*, is predicative, so that the phrase means ‘the man is good,’ then the formal relations of attribute and predicate are, at least in an imperfect way, distinguished and brought to the cognizance of the speakers. Here, as in many other similar cases, our own highly analytic language is able to illustrate the peculiarities of an uninflected tongue; we also have no other way to distinguish in nouns the object from the subject: thus, in *father loves son* and *son loves father*, a change of position effects a change of logical

office. Indeed, so bound are we to this method of indicating relation that, when we come to read or use languages more liberally provided with other methods, we are a little surprised and puzzled by their freedom of syntactical arrangement. But I think we can also see in our own experience that the relations indicated by position are more dimly brought before the mind than those exhibited by a change of form. Were it not for our pronouns *I* and *me* and their like, as already noticed, nominative and objective would never make their appearance as categories in English grammar.

It appears clearly, therefore, that the apparatus of formal designation is of great variety, and that some kind of it is not wanting in any dialect of human speech, however rude and undeveloped this may be: there is no language which fails altogether to signify the modifications and relations of its more material conceptions.

We have no reason to doubt that the main subjects of thought, the leading conceptions which enter into an act of judgment, and of which the expressions form the members of an assertion, are present to all human minds, in an essentially accordant manner, as standing in certain relations, belonging in certain classes, invested with certain general qualities. But different languages differ greatly as regards the notice which they take of these accessory matters. There is gender, for example. Our own mental apprehension of the diverse sex of objects having conspicuous sex is not less complete than that of the Roman, who intimated it by a difference in the ending and mode of declension of their names; especially, when the predication which we are making involves in any manner as a condition the distinction of sex. The same is unquestionably true of the Turk; only with him the apprehension is still more purely implicit; his language does not at all force it upon his notice—excepting, indeed, in the use of such words as *man* and *woman*, *son* and *daughter*, *bull* and *cow*, which are wanting in no language upon earth as names of creatures whose sex is so important a characteristic that it cannot be ignored. And the Turk might with no small show of reason claim that this is enough: why should he be called

on to take formal note of the sex or the non-sexuality of everything he finds occasion to mention, any more than of its size, or shape, or age, or distance? He might even be bold enough to go farther, and claim that the Latin system of grammatical gender was false and burdensome, a real caricature of natural relations; that it were better to leave altogether out of sight a genuine distinction than to rear upon it an immense artificial fabric, recognizing it in numberless cases where it does not exist, extending it through all creation, classifying objects as male or female, or neither, on grounds which no mortal is wise enough now to discover; and even sometimes denying or falsifying actual sex. And I do not quite see what we Indo-Europeans should have to say in reply to him, save that this imaginativeness and this tendency to the multiplication of formal distinctions are, after all, valuable qualities; qualities of which, notwithstanding the exaggeration of their action in certain directions, the desirable effects are to be seen through the whole structure of Indo-European language. I certainly should not presume to boast of the possession of grammatical gender, or to plume myself upon the fact that my ancestors revelled in it, and that most of my relatives have not yet let it go. The general suffrage of the nations is against the practical value of our particular variety of gender distinctions. It is travestied, as it were, in the generic classifications of the South-African languages, the foundation of which is even more problematical; or in the classifying numerals of Polynesian tongues, which compel from the mind constant recognition of resemblances and differences mainly of shape and value. The American Indian distinction of animate and inanimate objects, or that of persons and non-persons, which we ourselves imperfectly intimate in our use of *who* and *what*, is at least equally philosophical and equally useful with that which is founded on sex.

Take as another example the element of tense in verbal expression. The time of any stated action, with reference to the present or any other point from which it is contemplated, and its duration, as momentary or more or less continued, is unavoidably contemplated by the mind that states it; yet how

exceedingly different is the treatment of the element of time, in the systems of verbal conjugation of different languages! Some leave the whole determination of this relation to be inferred from the connection of the sentence, or intimate it, when necessary, by auxiliary particles; some, like the Semitic, have a quasi-temporal distinction founded on the idea of complete or incomplete action; forming a conjugational scheme which to us, with our habits of thought, appears strange and unmanageable. Even very near home, we meet with peculiarities of this character. Our own tongue, a thousand years ago, had no formal means of distinguishing future action from present. The French double past, "imperfect" and "past definite," makes a distinction apprehensible enough in the main, but with the minor details of whose application the English student has long to vex himself; indeed, it is only the advanced and perfected scholar, English, French, or German, who can in every given case employ the form of past time (including the perfect) required by the idiom of another than his own among those three languages. In our *shall* and *will*, too, as future auxiliaries, we have a subtlety of combined tense and mood distinction which is almost a match for anything in the Greek or Latin subjunctive. Our different forms of the present — *I love*, *I am loving*, *I do love* — by their incessant use and the necessity constantly imposed upon us of choosing between them, call up plainly before our minds distinctions which are comparatively unnoticed in French and German. Nor is the case different as regards mood. There are infinite shades of doubt and contingency, of hope and fear, of supplication and exaction, in our mental acts and cognitions, which all the resources of Greek synthesis or English analysis are but rude and awkward means of signifying. All the peculiarities and varieties, too, of verbal expression in our Indo-European dialects are as nothing when compared with those which surprise us in tongues of a radically diverse structure — such, for instance, as the Basque and the American Indian.

Amid all the infinity of possible relations and modifications of a central idea, there are some of so obviously practical a

character, so naturally suggested, that they are met with very generally, or almost universally, even among languages of ruder and scantier structure. To quote a prominent example or two—such is the plural of a noun, as formally distinguished from its singular; while, on the other hand, a dual, though tried by many languages, has been very generally abandoned again; and a special *ternal*, or threefold form, though not absolutely unknown, is one of the rarest items of grammar. Such, again, is the distinction of person in verbs and pronouns, or in pronouns alone; the speaker, the one addressed, the one spoken of, have their unfailing representatives in human speech. The variations here are of minor importance: there is the Semitic, which distinguishes masculine and feminine gender in the second and third persons of its verbs; and the languages are not few which have a double first person plural, one including and the other excluding the party addressed—one *we* made up of *I's* and *you's*, the other of *I's* and *he's*, without any *you's*. Further illustration is furnished by some of the cases which have already been cited for other purposes. It may be said, in general, that there is hardly any formal distinction, however apparently fundamental, which is not ignored in some known language; and, on the contrary, there is certainly no known language which does not present some subtlety of expression; some nice and delicate shade of difference of meaning incorporated in a grammatical form, belonging to itself alone and shared with no other.

It seems evident, therefore, that if a language is to be morphologically estimated and compared with others, it must be judged by the number of the formal distinctions which it succeeds in conveying, by the character of those distinctions, and by the means through which it conveys them. No one of these three tests—number, character, means—may be left out of account. The third is perhaps of the most decisive weight in fixing position in a morphological classification; yet it must not be applied alone; and especially not, if we are determining the general value of the language as a system of expression. The deficiencies brought to light by one test may

be counterbalanced by the advantages which the others exhibit. That the quality or relation or circumstance apprehended as a form be a valuable one, and that it be distinctly brought to consciousness — that is the main thing ; the particular instrumentality used is of minor consequence. There may be an abundance or a superfluity of inflective machinery which shall do poor work, cumbering the movements of thought ; and there may be a scantiness of formative apparatus so well adapted to its purpose and so dexterously administered as to be virtually wealth. The mind, in language as elsewhere, is superior to the instruments it employs ; it can do excellent work with tools apparently inadequate. As to the character of the tool, we are exceedingly liable to be swayed, in judging it, by our own habits. There are highly respectable students of language, speaking English as their native speech, who look upon Greek synthetic inflection as something to be contemned and apologized for, as characteristic of an inferior intellectual development, and burdensome to the minds that had to master and wield it ; there are many more, probably, who commit the equally gross error of holding English analysis to be a mere corruption and degradation of a nobler original. The awkwardness of the agglomeration of auxiliary words in languages like those of Farther India is a common theme of illustration and reprehension ; but it might not be hard for a Burman to retort by casting equal reproach upon us, on account of such phrases as *that which will have been set*, calling attention to the radical meaning of the vocables and the absence of inflective character in all but one (*been*), and giving as a paraphrase something like *that what-sort desire possess grown deposited*. And yet we know by experience that this last is in no degree or manner an equivalent for our phrase, in which each auxiliary is so strictly subordinated to its principal that it attracts no more of the mind's separate attention than a formative syllable, a prefix or suffix, would do ; the phrase is almost as integral as a simple word, and the impression of awkwardness is a subjective one ; the end aimed at is completely and conveniently attained. So as regards the kind of form incorporated. A language might

take special notice of the colors of sensible objects, classifying together those of kindred hue, and marking each class by a formal sign, so that color would thus be raised to the rank of a grammatical category ; and the same might be done with brightness or dullness, with smoothness or roughness, with shape, with presence or absence before the sight, with distance, or other the like. And if such grossness of distinction, such materiality of form, constituted the staple of the grammar of a language, we should be justified in ranking that language very low in the morphological scale. Yet some of our own most valuable forms had an origin as gross as this ; color, shape, and distance are capable of being made the basis of an analogical classification that shall run through the world of mind as well as matter, and lend itself to the best uses of thought. It is extremely convenient to adopt a single definite test, and by its application to arrange all languages on a linear scale, each having its precise place between two others ; but such a scale is worth little after it is made.

Nor is there any fixed and definite line to be drawn between the linguistic expression of material and that of form. There is rather a shading off from purely formal elements, synthetically expressed, through auxiliaries and relational words, into independent vocables belonging to parts of speech usually ranked as material. The same word has its more material and its more formal meanings and uses. Intellectual and moral terms have a less material aspect than physical. Adjectives are more akin with form than nouns, and adverbs than adjectives. Many relations whose synthetic expression constitutes an important part of the grammar of one language are in another left to the mere collocations of the phrase : thus, for example, the categories of caused or induced action, of attempted, of repeated, of intensified action, and so on, which suggest the conjugational distinctions of Semitic and other tongues, are with us not thought to deserve even auxiliaries. No concrete name is really other than an appellation for a complex of qualities ; no conception, or practically as good as none, is simple and incapable of analysis ; and of the combined elements any one may be set apart and treated as

an accessory to the rest, its expression thus assuming a formal value. The variety of possible relation and circumstance is infinite; nor is its style of incorporation in speech a restricted one.

Once more, through all the history of language, so far as we can trace it, the constant and normal tendency has been toward the reduction of the expression of material to that of form. It appears in every department of speech, and in every degree. Our *have*, for example, of which the formal applications now include past time, obligation, and causation, indicates earlier the comparatively material idea of 'possession;' and if we followed it up beyond this, we should find its origin in something still more physical. *Do* was once 'set, place,' and so has been partially formalized even in its most material present signification; in *do love* and *love-d* it is yet more purely formal. If there be one word more eminently formal than the rest, it is the substantive verb, the copula, *be*, which represents only the relation of mental combination between subject and predicate; yet it comes demonstrably from material roots, which first expressed such physical acts as sitting, standing, abiding, growing. So also among the parts of speech, it is the more formal that appear last, and appear by development out of the more material: this has been the history of the adverbs, the prepositions, the conjunctions, the articles; and if the pronouns still have to be looked upon as original in Indo-European speech, many linguists are confident of being able some day to trace their genesis to roots of material import. Among them, too, at any rate, the most material class, the demonstratives, is the earliest, and the most formal, the relatives, of very recent growth. All this is analogous with the development of language in other respects: coarser and grosser stuff is continually applied to finer purpose; intellectual and moral expressions are made by conversion from very different uses. This is so obviously and confessedly the way things go on in human speech, that further time spent in pointing it out and illustrating it would be wasted.

Some, indeed, may incline to regard the whole time spent

in our discussion as wasted, and the points made in it as mere commonplaces of the linguistic science of the day, with which even beginners ought to be familiar. Perhaps they would be right. But I may plead in my excuse that there are still those who deny and oppose the doctrines I have laid down, and would fain build up linguistic science on a very different foundation from that here implied. I have had in view throughout an essay by Professor Friedrich Müller of Vienna, entitled "*Beiträge zur Morphologie und Entwicklungsgeschichte der Sprachen, I.*," presented to the Vienna Academy in January, 1871, and printed in the *Sitzungsberichte* of its philosophico-historical class (vol. lxvii., pp. 139–156). Professor Müller is a scholar of very high rank, widely and deeply learned, enterprising and productive. His two volumes on the results, linguistic and anthropological, of the Novara expedition are admirable *résumés* of the present state of knowledge in their respective departments, and are also rich in new facts and new combinations and inferences. Apart from these, he has produced chiefly essays and monographs, on a great variety of linguistic topics, in the same series which contains the one we have now especially in view. In matters of linguistic theory and the history of grammatical forms, his views are at variance with those of the now dominant school of comparative philologists; some of them have been recently elaborately combated by Georg Curtius (in his *Studien z. Gr. u. Lat. Gr.*, iv. 211 ff.) but nothing of his has gone more flatly counter to the prevailing doctrines on points of fundamental importance than this particular paper; if its doctrines are true, the existing science of language is in need of thorough reformation.

First, Professor Müller rejects and contemns the current threefold division of language into isolating, agglutinative, and inflectional; not at all for the reasons which led me formerly* to regard its merits as greatly overestimated, but because "the morphological distinction of languages does not lie in the looser or closer mode of connection of the single parts — for this is something merely external — but in the

* Language and the Study of Language, lecture x., p. 358 seq.

separation (*Scheidung*) of material and form." Now this phrase, "separation of material and form," which Professor Müller insists upon and repeats again and again, as expressing the gist of his peculiar view, is to me well-nigh unintelligible. Perhaps the fault is in my apprehension, but I cannot help thinking that it is also unintelligent and meaningless. Its author certainly owed us a comment, to show what he meant to have his readers understand by it. In the first place, material and form are not separable from one another; everything has its characteristics and relations, belonging necessarily to it in a given situation; when we come, indeed, to test our knowledge to the bottom, we find that we know nothing but relations, and that we have no power to cognize the absolute. Then, in the second place, language is no separator of quality from substance, or of quality from quality; it does nothing but incorporate and express the results of mental action. The mind may contemplate the more external and accidental relations of a thing apart from those more constant and essential ones which to our ordinary apprehension constitute the thing itself; and the former, as we have seen, may find expression, with varying degrees of distinctness and by varying means. If we may interpret the "separation of material and form" to signify merely the distinction of form from material by separate expression, it has a meaning; but then, unfortunately, the doctrine becomes coincident with that which it is brought forward to oppose and put down; we are just brought back again to the old familiar view, that the morphological difference of languages consists in the forms which they respectively embody in expression, and the way in which these forms are embodied; and that hence the characteristics of isolation and the rest are real determining elements of prime importance in morphological classification. Since "form" is an essentially external characteristic, it is hard to see why a classification by form is to be reproached for dealing with externals. One might as well object to classing temples morphologically together as Grecian, Gothic, Egyptian, and so on, because this is noting only their external characteristics, without regard to such deeper differences as uilder, time, and purpose.

In a marginal note on this paragraph, Professor Müller thinks it a result of the superficiality pointed out by him that many scholars discover no really essential difference between the three classes mentioned. He is not quite sure whether they would go so far as to hold that an isolating language may become agglutinative, and an agglutinative inflecting, but cannot help inferring it from their doctrine that the Indo-European tongue itself was once monosyllabic. And he exclaims: "See in what vacillating (*schwankende*) and absurd views those become involved who found themselves on externalities, and leave the root of the matter unheeded!" Now Professor Müller has a perfect right to call his opponents' views "absurd," if they really appear so to him — there are those to whom the doctrine that the earth revolves on its axis and circles about the sun seems absurd, and no one blames them for frankly saying as much — but why he should fling at those views the epithet "vacillating" I do not at all understand. They are held, so far as I can discover, with the utmost distinctness and the most unwavering confidence, as an essential constituent part of a consistent linguistic system, which finds abundant support from the recorded facts of language-history. If the isolating phrase *lead did* could become the agglutination *lead-did* and *lead-de*, and finally the internally inflected *lēd*, a large class of linguists cannot see why the same process may not have gone on upon a scale vast enough to characterize a whole linguistic formation; and they even think that the burden of proof rests upon those who maintain the contrary.

Our author closes his note with the assertion that "languages which from the very beginning have lacked the feeling for form will never develop themselves into form-languages." Now, in the first place, I do not believe that any language ever had either a feeling or a lack of such; the expression is one of those purely figurative ones which have a wonderful facility at leading men's minds astray. The users of language are the only feeling agents, and they are the developers of language; they have, always and everywhere, as has been abundantly shown above, more or less consciously

forms in their apprehension, and it depends only on their aptitude as mental analysts and linguistic constructors which of these they shall incorporate in distinct expression, and by what means. And that the aptitudes of different communities are different appears not in language only, but also in every other human production. In the second place, there is no real reason, no scientific accuracy, in calling certain languages, as distinguished from others, "form-languages," as if the possession of forms were other than universal, or as if a part of human speech possessed "true forms," while the rest had only apparent or unguenuine forms. For, as we have seen, a form in language is simply the incorporate expression of an idea which is regarded as subordinate to a class of ideas, as their modification or the determinant of their relation; and wherever that end is attained, there is form. And it is attained everywhere, only in varying extent, and by discordant means; it is impossible to conceive of a language not in its absolutely incipient stage which should be destitute of form. There is difference enough between languages as regards this element of their structure, but it is only a difference of degree; to make it otherwise is to distort and misrepresent the facts of language.

Although tempted to go through all the last few pages of Professor Müller's essay, criticising their statements and reasonings, I will quote only one other paragraph. He has been pointing out that some would parallel the primitive Indo-European language with the now existing monosyllabic tongues, but that this would imply the existence in the former of that non-separation of material and form which we see to characterize the latter; and he then proceeds: "Now, however, the Indo-European tongues belong confessedly (*bekannt-ermassen*) to those which have carried through on principle a separation of material and form." This "confessedly," we may remark in passing, is hardly consistent with his plea, a page or two back, that his opponents — that is to say, nearly the whole body of comparative philologists — make no account of the separation in question. And even if these languages have "carried through" such a separation, they need not have

been at the outset unlike those which never have succeeded in carrying it through. But this is an objection which the next sentence endeavors to dispose of: "As one nevertheless does not comprehend how material can have suddenly become form, how material elements can have transformed themselves to formal, the assumption that in primitive Indo-European speech there was found only material (expression of significance), and no form (expression of relation), cannot possibly be correct." It here appears clearly that the discordance of view between Professor Müller and the rest of the philologists is total, and probably hopeless of removal. To us, as has been pointed out above, the whole history of language seems to prove, not only that elements of material expression can and do become transmuted into formal, but even that formal expression is won in no other way. We are filled with wonder and expectation as to what can possibly be brought forward to oppose, much more to nullify and overthrow, the immense mass of facts exhibiting the transfer which is here so dogmatically denied. The author fairly owed it to his readers to support his assumption, by illustration and argument. All that he gives us in this direction is a new assumption, with which he winds up the paragraph: "Notwithstanding its isolating structure, the primitive Indo-European language also must have distinguished material and form, and in the *ma* of the two combinations *i-ma*, *as-ma* [the originals of Greek *εἶμι*, *εἰμι*] there must have resided a form-making function." These are necessities which I cannot appreciate. Indeed, it is to me little short of nonsense to talk of a function as residing in a word, as inherent in its structure. I can see nothing in a word but the significance which its speakers put and keep there, and this significance is changeable according to their convenience and choice. The word is merely the instrument of the mind, and can be turned to new and wholly diverse uses by the agent that wields it. The capacity of *i-ma*, or of *i ma*, to become a form is really the capacity of those who said the one or the other to convert it into a form—as they actually did, and as their descendants have done in a host of cases since. There is perhaps a "form-

making function " lurking to-day in many an innocent-looking vocable, which we use without a suspicion of its pregnancy of meaning. No Roman who said *habeo* and *mente*, doubtless, knew or conjectured that they contained form-making functions which would some day transmute the one into a future tense-sign and the other into an adverbial suffix (as in *aimer-ai*, i. e. *amare habeo*; and *bonnement*, i. e. *bonâ mente*). And there have been plenty of other functions, of a very portentous character, residing in our words. What shall we call that, for example, which has developed the Italian word for a 'bench,' *banco*, into a name for great moneyed institutions, throughout the civilized world? Compared with this, the change of *i-ma* to *εἶμα* is surely one of very small account.

The matter here involved is of the most fundamental importance. If language is a direct emanation of the mind, or an organic product, a sort of excretion, of the bodily organs, so that a word, in any one's mouth, is an entity having a natural and necessary significance, and can even involve powers which may lie indefinitely dormant and finally come forth into action, then one set of opinions on all theoretic points in linguistics will follow; but another and a very different one, if words are only signs for ideas, instruments with which the mind works, and every language therefore an institution, of historic growth. Till this question is settled, there will be no harmony among students of language, even as there is none at present. To urge the direct examination of it, and on grounds of common sense, by sober observation and strictly scientific deduction, is a main object of this paper. The true scientific basis of linguistic investigation is far from being as yet universally understood and accepted. To show that this is so, I will here refer briefly to a single fact. Westphal, in his German and Greek grammars, puts forth and defends, in opposition to the prevalent Boppian theory of agglutination and fusion, his own view that suffixes were never independent words, but sprouted out, as it were, from the body of the roots to which we find them attached; and the leading linguistic Review of Germany (the Berlin *Zeitschrift für Völkerpsychologie und Sprachwissenschaft*, vol. vi., 1869, p. 483 seq.) impartially reports the two views, side

by side, and pronounces them alike purely hypothetical and in themselves equally entitled to acceptance; the Westphalian one having, if anything, a greater plausibility than the other. On the contrary, there is an essential and world-wide difference between them: the one is a guess, the other an induction: the Boppian view is founded on a mass of facts well established in the observed history of language; the other is opposed to these facts, and has no basis except conjecture. The starting-point of science, in this as in other branches, is the facts that lie nearest, within reach of our objective and unbiassed observation; and the scientific method consists in carrying backward existing and observed processes, modifying them only so far as the changed conditions require their modification, and calling in no new force to account for what the old forces can possibly be made to explain. There are those who profess to accept this method, and are yet in practice untrue to it: more often than in any other way, by assuming that the governing forces and modes of action in ancient and primitive stages of language were and must have been diverse from those traceable in later stages. Differences enough, to be sure, there are between older and newer forms of language, especially in families which have had so rich a historic development as the Indo-European; but they are the consequence of a gradual accumulation of results in a single unbroken line of action. So the physicist, reasoning backward from the appearances of existing nature, arrives in theory, perhaps, at a primitive condition of nebulous chaos; but he does it by strict inductive processes, and never thinks of postulating for the nebulous period other physical forces than those which now work, under changed conditions, with different result. To do otherwise is to abandon the scientific basis, and place one's self at the mercy of every arbitrary assumption.

I will only remark farther, in conclusion, that the whole substance of Professor Müller's paper appears to me to show the same regrettable tendency toward dogmatic assumption, as opposed to sound and circumspect induction. His leading idea is, that there has been in the career of every language a

period of ascending and one of descending development, first of growth toward completeness of structure, then of internal expansion but external or phonetic decay; the former period being pre-historic, the latter historic. Now, as a fact, something like this is incontestably true of most languages; but he puts it forward rather as a law, the dominion of which is to be illustrated; and anything of the nature of a law or principle I am quite unable to see in it. As regards, indeed, each separate and individual formation in language, each vocable, it is a law; the agglutination and fusion that makes a word is only the first step of a process of wearing down and wearing out; and this is equally true of the earliest and of the latest formations. So long, then, as more new formations are made than old ones worn out, the general growth of a language is upward; when the contrary begins to be the case, the growth is downward. And there is no law that determines the turning-point in this grander process — or, if there be one, it has not yet been worked out and established. Just so in the life of every human being there is a clearly recognizable law of youth and growth and decay and death; but a community grows so long as births are in excess of deaths, and decays when deaths are in excess of births: and for this there is no law; it depends upon a variety of determining influences so great and so heterogeneous that they defy reduction to a law. To ascertain what causes, internal or external, or both, produce this climax and anti-climax of language, and whether the descending grade has everywhere been reached, and, if so, when and how, would be a grand and worthy undertaking. But it is one which Professor Müller does not attempt; and his exposition furnishes occasion throughout for unfavorable criticism, and is nearly or quite barren of valuable result.